City of Mesa

Analysis of Existing Office and Industrial Land Supply and Demand Study

March 19, 2001

Prepared by:

E

Real Estate Advisory Services

Two N. Central Avenue, Suite 2300 Phoenix, Arizona 85004 March 19, 2001

Mr. Keno Hawker Mayor City of Mesa 20 East Main Street Mesa, AZ 85201

Dear Mr. Hawker:

In accordance with our engagement letter dated November 21, 2000, Ernst & Young LLP ("E&Y") has performed certain procedures related to the analysis of existing office and industrial land supply and estimated office and industrial demand for the City of Mesa. Our key findings and conclusions are presented in the attached report and subject to the assumptions and limiting conditions that follow.

This report is intended solely for the use of the City of Mesa, and should not be used by those who did not participate in the formation of the procedures. The Client understands that any omissions or misstatements of material information may materially affect the analysis.

The approach and methodologies applied in our report do not comprise an examination in accordance with generally accepted auditing standards, the objective of which is the expression of an opinion regarding the fair presentation of financial statements or financial information presented in accordance with generally accepted accounting principles. The scope of work in this engagement is not to be construed as an audit or review of any of the financial information as defined by the American Institute of Certified Public Accountants.

Any financial analyses we have performed should not be considered as a "forecast" or "projection" as technically defined by the American Institute of Certified Public Accountants. The use of the words "project," "forecast," or "projection" relate to broad expectations of future events or market conditions and quantification of the potential results of operations under those conditions. Since the projections are based on estimates and assumptions that are inherently subject to uncertainty and variation depending upon evolving events, we do not represent them as results that will actually be achieved.

Finally, neither our report, nor its contents, nor any of our work were intended to be included and, therefore, may not be referred to or quoted in whole or in part, in any registration statement, prospectus, public filing, private offering memorandum, loan agreement or other agreement or document without our prior written approval, which may require that we perform additional procedures, nor can it be used for any purpose other than as expressly stated in this report.

Ernst & Young LLP

Ernst + Young LLP

The advisory services and report prepared by E&Y will be subject to the following considerations and limiting conditions. The analysis and recommendation will be based on prospective information and financial data provided by the Client and its advisors. We will simply evaluate the figures provided and advise the Client of our findings. In addition, the Client recognizes that:

- For any land uses proposed or analyzed, E&Y does not represent that the land use will be a conforming use or that the zoning can be changed to an appropriate zoning code for that use.
- E&Y has not reviewed any environmental reports on the subject property and has not factored into
 its analysis any adverse impact or limitations pertaining to environmental issues or the costs of any
 related remedial efforts.
- It is our understanding that this advisory report is for your project due diligence procedures. While we realize the engagement is subject to public disclosure laws, neither our report, nor its contents, nor any of our work were intended to be included and, therefore, may not be referred to or quoted in whole or in part, in any registration statement, prospectus, public filing, private offering memorandum, loan agreement or other agreement or document without our prior written approval, which may require that we perform additional procedures, nor can it be used for any purpose other than as expressly stated in this report.
- The report is intended for the Client's internal use and due diligence only. We are acting as part of the Client's overall due diligence team.
- Estimates of future events described in the report will represent general expectancy concerning such
 events as of the reporting date. Since our estimates are based on assumptions that are inherently
 subject to uncertainty and variation depending upon evolving events, we do not represent them as
 results that will be actually achieved. Some assumptions inevitably will not materialize and
 unanticipated events and circumstances may occur; therefore, the actual results achieved may vary
 materially from the estimated results.
- E&Y is not obligated to update the due diligence report for events subsequent to the date of our report. All services subsequent to delivery of the report, including meetings, testimony or deposition in court or before any governmental agency, will be provided at our standard billing rates plus any expenses.

- Except as specifically stated to the contrary, the advisory report will not give consideration to the
 following matters to the extent they exist: (i) matters of a legal nature, including issues of legal title
 and compliance with federal, state and local laws and ordinances; and (ii) environmental and
 engineering issues, and the costs associated with their correction. The user of the advisory report
 will be responsible for making his/her own determination about the impact, if any, of these matters
 reported.
- The reported advisory observation(s) will represent the considered judgment of the identified advisors based on the facts, analyses and methodologies described in the report.
- All direct and indirect written information supplied by the City of Mesa ("City"), its agents and
 assigns, concerning the market is assumed to be true, accurate and complete; additionally,
 information identified as supplied or prepared by others is believed to be reliable. However, no
 responsibility for the accuracy of such information is assumed.
- This report is intended to be read and used as a whole and not in parts.
- None of the contents of this report shall be disseminated to the public through advertising media, sales media, Security Exchange Commission, or any other public means of communication without the prior written consent and approval of E&Y.
- With respect to our analyses, our work did not include an analysis of the potential impact of any unexpected rise or decline in local or general financial markets or economic conditions or technological changes.
- E&Y's liability to Mesa, regardless of whether such liability is based on breach of contract, tort, strict liability, breach of warrants, failure of essential purpose or otherwise, under this Agreement or with respect to the services shall be limited to the amount actually paid by City to E&Y under this Agreement. If E&Y is working on a multi-phase engagement for the City, E&Y's liability shall be limited to the amount paid to E&Y for the particular phase that gives rise to the liability.

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Engagement Procedures

The REAS group of E&Y completed the following scope of work for the Subject engagement:

- Met with representatives of the City of Mesa.
- Read copies of the 1996 General Plan and the Williams Gateway Airport Master Plan.
- Obtained Spatial databases for mapping from Mesa for the General Land Use Plan and the Existing Land Uses.
- Identified and mapped vacant acreage in the Commerce Park (CP), General Industrial (GI), and Office (O) land use categories.
- Quantified regional employment and population trends.
- Estimated regional demand for office and industrial designated land based on population and employment growth.

Area Overview

The Phoenix-Mesa Metropolitan Statistical Area (MSA) has demonstrated stronger long-term growth rates than any other major metropolitan area since the 1940s. The MSA has evolved from a small agricultural area in the middle of the desert to a regional hub for business and industry in the southwestern United States. Overall, the area's near-term outlook appears positive with new business and industry continuing to relocate to the MSA, aggressive transportation programs being implemented, visitor numbers continuing to increase, and major national and international companies making investments in the area.

Far East Valley Overview

The Southeast Valley is comprised of a group of cities including Mesa, Tempe, Chandler, Gilbert, Apache Junction, Queen Creek, unincorporated portions of Maricopa County within the Mesa MPA, Unincorporated portions of Western Pinal County along the Hunt Highway Corridor and the Gold Canyon development area. For purposes of this report, we excluded Tempe and Chandler statistics and growth from our analysis due to their distance from WGA the near-term build out of Tempe, and their commute sheds, which include even larger parts of the valley.

Several factors such as perceived high quality of life, low cost of living, low unemployment rates, and easy accessibility to other cities in the MSA have resulted in tremendous population growth in the East Valley, especially in Mesa, Chandler and Gilbert. Although most of the development is concentrated in Mesa and followed by Gilbert, other parts of the East Valley that are currently characterized by agricultural and vacant desert land will soon be following suit. The future development of the Santan



Williams Gateway Airport Overview

With the closure of the Williams Air Force Base in 1993, an advisory committee appointed by the Governor of Arizona prepared an Economic Reuse Plan for the Base to promote new economic activity and minimize the adverse impacts brought by the Base closure. The Reuse Plan was the first step towards providing a basis for future decisions that, by necessity, would become increasingly more specific. The three planned foci for the Base included the Williams Gateway Airport (WGA), Williams Airport Business Parks, and the Williams Educational, Research and Training (ERT) Campus.

Currently a reliever airport to Phoenix Sky Harbor Airport, WGA is also developing as an international aerospace center with aircraft manufacturing, maintenance, modification, testing, and pilot training. The Business Parks located in three different areas primarily serve the aviation industry. Reuse of the remaining portion of the former Base comes in the form of the Williams ERT Campus, an innovative, multi-jurisdictional institution for higher education, research, and training. A consortium of various educational institutions, Williams ERT Campus is anticipated to enroll 20,000 students by 2015.

Roadway Improvements

The completion of the Santan Freeway from Interstate 10 to U.S. 60 in 2006 will have a significant impact on the Far East Valley. Three interchanges, at Power Road, Hawes Road and Elliot Road, will provide easy access to the WGA area. Additionally, the Maricopa Association of Governments Transportation Improvement Plan provides for the expansion, improvement, and construction of several arterial roads around the Airport. The expansion of the Red Mountain Freeway to Higley road in 2003 will enhance the industrial area around Falcon Field and the existing Boeing facility. Mesa has also discussed a future arterial loop road around WGA, providing more direct access to the Santan Freeway.

Regional Growth Factors

Mesa has the largest concentration of industrial land uses among all East Valley cities. General Motors Desert Proving Grounds occupies 5,000+ acres east of WGA, while other major industrial users include AT&T, Boeing, Talley Defense, TRW, Motorola, Arch Chemicals, PTK Polytech and AmSafe, Inc. Growing population in the Far East Valley and proximity to freeways and major arterials will further support industrial development and potential for employment in turn will entice more people to move to the East Valley.

Williams Gateway Airport is an economic engine for the entire East Valley. It is having a significant impact in enhancing the image, identity and economic potential of the East Valley and offers the potential for surrounding jurisdictions to plan for their collective future well into the 21st century.

The Far East Valley has other factors that would positively impact growth. A solid housing mix with homes for executives and affordable housing for workers draws companies to the area. Good schools and a solid transportation infrastructure are positive assets for employers. Most importantly, the available land will be a strong attribute for new businesses that locate in Mesa.

Supply Model

The supply model quantifies the amount of vacant land available for industrial use in the City of Mesa and for the other Far East Valley communities identified. Office and industrial land from the community general plans were identified. Only currently vacant developable land was included in the calculation of available supply. The East Valley communities of Mesa, Gilbert, Queen Creek, and Apache Junction have 15,767 acres of vacant developable office and industrial acres with 11,632 gross located in the City of Mesa.

Demand Analysis

The demand model quantifies the amount of office and industrial land required to sustain residential build out. The number of new residents at build out was estimated. A job per capita was applied to estimate the number of new jobs created based on population. The quantity of land required to accommodate new employees was estimated.

Our analysis indicates 7,860 acres are necessary for estimated new regional employment growth and an additional 1,047 acres are required to accommodate recaptured employees by increasing Mesa's population to employment ratio closer to county averages. This is a total of 9,295 acres.

Summary of Findings

Our analysis estimates that 15,767 acres of vacant office and industrial acreage are potentially available in the Far East Valley, with 11,632 gross acres located in the city of Mesa. Our demand model estimates that 10,481 acres of office and industrial land will be required to sustain residential build out of East Valley cities. Our estimates assume that Mesa will engage in proactive efforts to increase Mesa's jobs per capita ratio to slightly above the current county average, which has been increasing.

These results indicate more land supply than our demand analysis appears to warrant through build out in the Far East Valley based upon estimated population and resulting employment growth. There are, however, several factors that must be considered in evaluating the credibility of the land supply base including:

- Long-term general plans may change in the future based upon changing market demands;
- Parcels that do not have adequate freeway access;

- Impact of WGA noise controls and efforts to protect aviation related uses from residential encroachment;
- Parcels that will be developed for other uses (which has been occurring over the past several years in Mesa); and
- Sale of State Trust Lands.

These factors will work to reduce the potential supply of office and industrial land in the East Valley.

We have not deducted any of the preceding acreages from our supply base. It is possible that additional acreage currently designated for office and industrial uses could be developed with other commercial and residential uses, which has been occurring over the past several years in Mesa. Our analysis assumes every acre currently designated for office and industrial uses will be developed with office and industrial buildings.

We also did not address the issue of which acreage would be developed first. We believe the WGA area will become a major employment center, and it should develop earlier than other planned office and industrial parcels in the Far East Valley due to superior access to WGA, roads, utilities, population, and city amenities.

Therefore, while there appears to be an excess of office and industrial land uses designated in the Far East Valley, we believe the WGA area will develop prior to the development of other secondary office and industrial areas. This is due to:

- Proximity to Williams Gateway Airport and Williams ERT;
- Proximity to freeway infrastructure;
- Central location in far East Valley;
- Availability of large tracts of land; and
- Accessibility to large and educated labor force due to proximity of both affordable and executive-style housing.

Arizona

Known around the world for its natural beauty, varied recreational activities, and diverse cultural opportunities, Arizona is geographically the sixth largest state at 114,000 square miles and a population of almost five million residents. Its main economic sectors include services, trade, and manufacturing along with significant mining and agricultural operations.

Arizona remains one of the fastest growing states in the nation, ranking near the top in employment, personal income and population growth. Despite a slowdown, Arizona is expected to continue to be among the leaders in the nation in most areas of economic growth for the foreseeable future.

Population

According to DRI/McGraw-Hill, Arizona has been one of the fastest growing states throughout the 1990s, ranking second only to Nevada on a percentage basis. Arizona's population grew at a compound annual rate of 3.3 percent during the 1990s from 3,665,228 residents in 1990 to just below 5.0 million in 1999, a rate triple the U.S. average.

The following table illustrates historical and projected population figures for Arizona, metropolitan Phoenix, and the United States.

Historical and Estimated Future Population (in thousands)				
1990	2000	2005 E*	CAGR (1990-2000)	
2 120	2 001	2 220	3.45%	
3,679	5,131	5,554	3.38%	
249,464	281,422	286,549	1.20%	
	2,130 3,679	2,130 2,991 3,679 5,131	2,130 2,991 3,330 3,679 5,131 5,554	

*E = Estimated

Source: Greater Phoenix Economic Council Note: CAGR is compound annual growth rate

Employment

Fueled by six consecutive years of substantial tax reductions, Arizona is the second fastest growing state in the nation with a projected population of 6.1 Million by 2010. The unemployment rate for Arizona was 3.8% for 2000 down from 4.4% in 1999.

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Phoenix-Mesa Metropolitan Area

Phoenix, the largest city in Arizona as well as the sixth largest city in the nation, serves as the state's capital and economic center. The city of Phoenix is considered the hub of the rapidly expanding Southwest, and acts as the epicenter of a metropolitan area with an estimated mid-year 2000 population of 3.1 million. The Office of Management and Budget redefined the Phoenix-Mesa metropolitan statistical area (MSA) to include Pinal County, 5,433 square-miles located to the southeast of Maricopa County. Pinal County was added to the Phoenix-Mesa MSA after the 1990 Census revealed its strong commuter ties to the larger Maricopa County.

The Phoenix-Mesa Metropolitan area, as well as the state of Arizona in general, has a cyclical growth economy tied to its high-tech manufacturing; services; and finance, insurance and real estate sectors. Although Arizona has been diversifying and becoming less dependent on any one particular sector of its economy, it is believed that the cyclical growth trend will continue into the foreseeable future. Phoenix typically operates on a seven- or eight-year cycle, which would indicate that the recent expansion is nearing an end and that the metropolitan area's growth rates should decline over the next few years, but remain positive.

Population

Phoenix's skilled workforce, education, sunshine, surrounding mountains, high desert terrain, low cost of living, and ability to lure companies to expand operations into the Valley (with low wages, energy rates, and construction costs) are some of the many reasons responsible for the growth in new residents and tourists to the area.

The Phoenix-Mesa metropolitan area has exhibited substantial growth for the last several decades. According to the Arizona Department of Economic Security, population increased from 1,600,093 in 1980 to 2,238,480 in 1990, for a compound annual growth rate of 3.4 percent or an average of 63,839 residents per year. Phoenix continued to grow throughout the 1990s at a compound annual rate of 3.6 percent. Phoenix is now the sixth largest city in the U.S., and the 12th largest metropolitan area with an estimated mid-year 2000 population of 3.1 million. By the year 2004, the population is projected to be almost three and a half million.

Phoenix-Mesa area growth can be ascribed largely to positive in-migration throughout the 1990s. A variety of factors affect the migration to and from a region. According to *Arizona Business*, job availability, climate, and lifestyle "pull" migrants to the state. These attributes have positively impacted migration flows to Arizona for the past half-century. Other western states compete with Arizona for migration, and each state's ability to attract migrants impacts Arizona's growth. However, due to the variations in pull pressures and timing differences in neighboring states' economic cycles, Arizona's appeal has remained relatively constant over time. "Push" pressures such as economic conditions, climate, and environment also contribute to the growth of the state and its metropolitan areas. For instance, due to the economic recession experienced by California in the early 1990s, Arizona attracted a large percentage of California in-migrants. According to the Center for Business Research at Arizona

State University, net migration to Maricopa County peaked during the economic expansion in 1996 at 69,000. By 1999, net in-migration had dropped to 59,000. The net migration figures are illustrated in the following table.

Maricopa County Net Migration Figures						
	1995	1996	1997	1998	1999	
Net Migration % Change	53,000 N/A	69,000 30.2%	58,000 -15.9%	61,000 5.2%	59,000 -3.3%	

E=Estimated

Source: Center for Business Research, Arizona State University, January 2001

Employment

The Phoenix-Mesa MSA possesses a diversified economic base. The five major employment sectors are manufacturing (high tech and light manufacturing), travel and tourism (lodging, entertainment and dining), regional hub activities (retail and warehousing), public sector activities, and construction-related employment. The largest private employers include Honeywell, Motorola, Banner Health System, Wal-Mart, The Kroger Company, Raytheon Missile Systems, American Express, Bank One Corp., Intel Corp., America West Airlines, and Safeway Stores.

Major Phoenix-Mesa Employers					
State of Arizona	59,348	U.S. Postal Service	9,756		
Honeywell/Allied Signal, Inc.	17,500	Raytheon Missile Systems	9,700		
Motorola	15,500	American Express	9,000		
Banner Health System	13,973	Bank One Corporation	9,000		
Maricopa County	13,860	Intel	8,150		
Wal-Mart Stores	13,800	America West Airlines	8,446		
City of Phoenix	12,917	Safeway Stores	8,012		
The Kroger Co.	9,837	ASU (Main, West and East	8,000		
		Campuses)			

Source: Greater Phoenix Economic Council, Arizona Business Journal June 1999

The Phoenix-Mesa MSA is estimated to experience the largest percentage increase in labor force in the nation over the next five years. The following table illustrates historical year-end labor force and employment data for 1997, 1998, 1999, the first half of 2000.

Historical Year-End Labor Force Statistics					
	1997	1998	1999	2000	
Arizona					
Labor Force	2,184,624	2,254,983	2,363,705	2,401,000	
Employment	2,083,090	2,161,621	2,259,547	2,310,000	
Labor Force Growth	-	3.2%	4.5%	1.6%	
Unemp. Rate	4.7%	4.1%	4.4%	3.8%	
Phoenix – Mesa MSA					
Labor Force	1,378,486	1,439,036	1,514,859	1,540,200	
Employment	1,337,624	1,401,556	1,470,172	1,501,000	
Labor Force Growth	-	4.5%	5.2%	1.7%	
Unemp. Rate	3.0%	2.7%	2.9%	2.5%	

Source: Greater Phoenix Economic Council

	1997	1998	Growth Rate 97-98	1999	Growth Rate 98-99	2000	Growth Rate 99-00
Manufacturing	158,600	166,700	5.1%	161,800	(2.9%)	162,700	0.5%
Mining	1,000	800	(20.0%)	1,100	37.5%	1,100	0%
Construction	93,000	104,400	12.3%	112,300	7.6%	115,500	2.8%
TPU	69,000	73,400	6.4%	78,600	7.1%	83,600	6.4%
Trade	331,100	345,800	4.4%	357,000	3.2%	369,400	3.5%
FIRE	106,400	113,100	6.3%	118,000	4.3%	124,000	5.1%
Services	424,000	446,200	5.3%	486,200	8.9%	518,100	6.6%
Government	<u>160,100</u>	<u>168,500</u>	<u>5.3%</u>	172,100	<u>2.1%</u>	<u>178,800</u>	3.4%
Total	1,344,300	1,418,900	5.5%	1,487,100	4.8%	1,553,200	

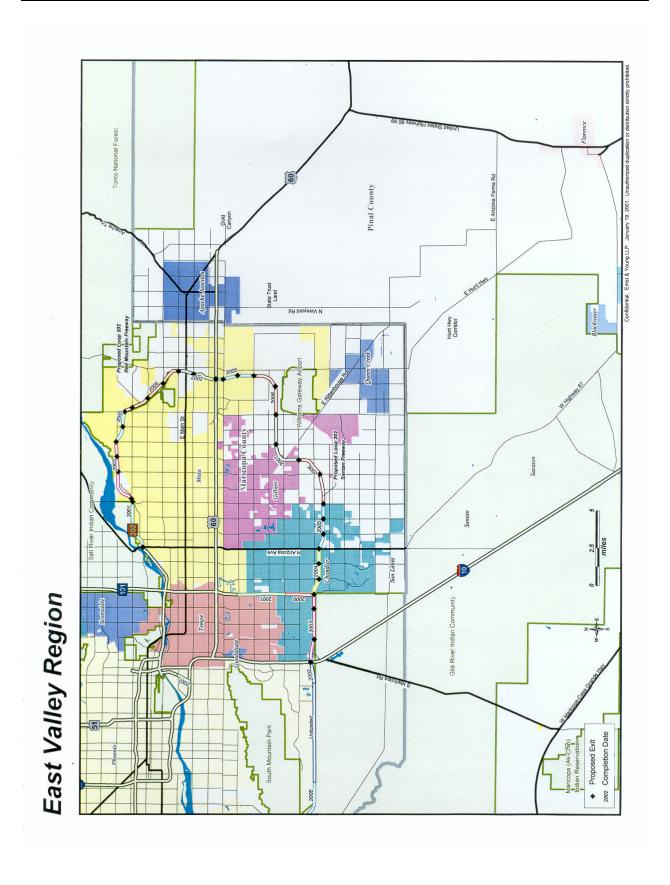
Source: Greater Phoenix Economic Council; Arizona Department of Economic Security

The labor force for the State of Arizona and the Phoenix-Mesa MSA continued to grow in 2000 but at a much slower place. Overall labor growth in the Phoenix-Mesa MSA was 1.6%, well below the 4.5% posted in 1999. Despite the slow down in growth, the unemployment numbers remained low. Phoenix-Mesa had 3.8% unemployment in 2000. Most sectors show slight downturns in growth in 2000. The largest change came in the growth dependent construction industry. The construction industry grew 2.8% down from 7.6% growth in 1999 and 12.3% in 1998.

Air Passenger Travel

The Federal Aviation Administration has designated Sky Harbor International Airport as one of the fastest growing airports in the nation. Commercial passenger traffic at Phoenix's Sky Harbor International Airport measured 33.6 million in 1999, deeming the airport 12th busiest in the nation in terms of passenger traffic.

Sky Harbor is served by most major domestic carriers, and averages over 1,300 daily commercial flights. America West Airlines (based in Tempe) and Southwest Airlines both utilize Sky Harbor as regional hubs.



For this report, we have defined the Far East Valley as an accumulation of the cities of Mesa, Gilbert, Apache Junction, and Queen Creek, as well as the unincorporated portion of Maricopa County within the Mesa planning area, the Gold Canyon area and the unincorporated Western Pinal County between Queen Creek and Florence along the Hunt Highway Corridor. The cities of Tempe and Chandler, as well as Ahwatukee and the emerging market north of Casa Grande are considered a separate region. While there will be interaction between these regions, it is assumed that interaction between supply and demand in these regions would have a counter- effect and therefore, negligible.

Population

The current population of these areas is approximately 570,000, and is expected to reach nearly 1.4 million at build-out. Portions of the Far East Valley have grown at strong rates with Mesa, the third largest city in Arizona, showing a 30 percent growth over the past nine years and Gilbert experiencing a 219 percent population gain over the same period.

Existing East Valley Population				
Mesa ¹	388,185			
Gilbert ¹	108,745			
Apache Jct ¹	25,880			
Queen Creek ¹	3,955			
Unic Maricopa County in Mesa MPA ²	36,387			
Hunt Hwy Corridor ³	500			
Gold Canyon ³	6,300			

¹ Arizona DES July 2000

Source: MAG, US Census Bureau, EY Research

Employment

The unemployment rate in 1995 and 2000 for the Far East Valley is extremely low compared with Phoenix and Arizona, and is considered to be operating at full employment.

Unemployment Rates				
Area	1995	2000		
Mesa	2.9%	2.2%		
Phoenix MSA	3.5%	2.6%		
Arizona	5.1%	3.8%		
United States	5.6%	4.0%		

Source: Arizona Department of Economic Security

² Maricopa County Special Census 1995

³ EY Research 2001

The Far East Valley offers a wide variety of standard and high-tech manufacturers in addition to testing operations including vehicle airbags and components, and space propulsion units. Motorola, which is a major employer throughout Greater Phoenix, has a major manufacturing facility in Mesa. At least thirty Fortune 500 companies have a presence in the area.

Major Far East Valley Private Employers				
Banner Health Systems	5,800			
Boeing Co.	5,300			
AT&T Corp	3,650			
Motorola Semiconductor Products Sector	3,100			
TRW Vehicle Safety Systems	3,000			
GM Desert Proving Grounds	1,400			
Intesys Technologies	1,200			
Empire (Southwest) Machinery	1,100			
Phoenix Newspapers Inc	1,000			
Excell Agent Services	1,000			

Source: Greater Phoenix Economic Council, Megacorp, City of Mesa

Transportation

For a metropolitan area of more than 3.1 million people, the Valley has historically possessed a limited freeway system. However, recent additions and an expedited construction schedule have provided improved freeway access to Phoenix suburbs.

Additionally, in March 2000, Phoenix voters passed a referendum to provide funding for a light rail system to alleviate commuter traffic in the city. The system is initially scheduled for development in central Phoenix, Tempe and western Mesa, but later stages will provide connectivity with other suburban initiated rail systems.

Mesa Overview

Mesa is located approximately 15 miles east of downtown Phoenix, and covers more than 125 square miles. It has grown to become Arizona's third largest city, and the nation's 45th largest city with a population of almost 390,000 residents as of July 1, 2000 and an estimated 135,000 winter visitors for an average of 4.2 months each year. The City's current population estimates exceed 400,000. According to the City's web page, Mesa's growth can be attributed to the low cost of doing business, reasonable tax structure, skilled and well-educated workforce, sophisticated infrastructure, low crime, superior schools, affordable housing, excellent quality of life, and abundant water supply. Mesa serves as the medical and trade center of eastern Maricopa County with two regional malls, several major medical facilities, and all the amenities of a major city.

The Superstition Freeway (U.S. 60) runs east and west through Mesa, linking the City to Interstates 10 and 17. The Red Mountain Freeway (Loop 202) is currently under construction, and will be accessible from the northern area of the City. The Santan Freeway (the southern part of Loop 202) is projected to cross a southern part of Mesa from Power Road turning north to intersect with U.S. 60. All sections

of these freeways are funded and will be completed by 2007. Mesa is served by two reliever airport facilities, Williams Gateway and Falcon Field. Williams Gateway Airport and area freeway improvements are discussed on the following pages.

In Mesa, the median household income in 1995 was \$33,676, slightly below the County median income of \$35,623. Approximately 55 percent of the population is in the prime work force range of 18-59 years old. Mesa residents are well educated with approximately 58 percent having some college experience. The July, 2000 population of 388,185 is projected to grow approximately three percent annually to 435,960 in 2005 according to the Arizona Department of Economic Security.

The closure of Williams Air Force Base in 1993 initiated the three planned foci of development for the former Base as illustrated on the following page – and include the Williams Gateway Airport ("WGA"), Williams Gateway Airport Business Parks, and the Williams ERT Campus. Encompassing 4,052 acres of land, the Economic Reuse Plan for the Base has allocated approximately 900 acres of land for developing an education, research, and training campus with a projected 20,000-student population at build-out. Approximately 1,000 acres of planned industrial/commercial land surround the airfield. The plan forecasts roughly 287,000 annual operations (takeoffs/landings) by the year 2015. Currently, more than 20 aviation companies operate at the facility, and the remaining 1,000 acres, available for aviation companies are in demand.

Transportation/Access

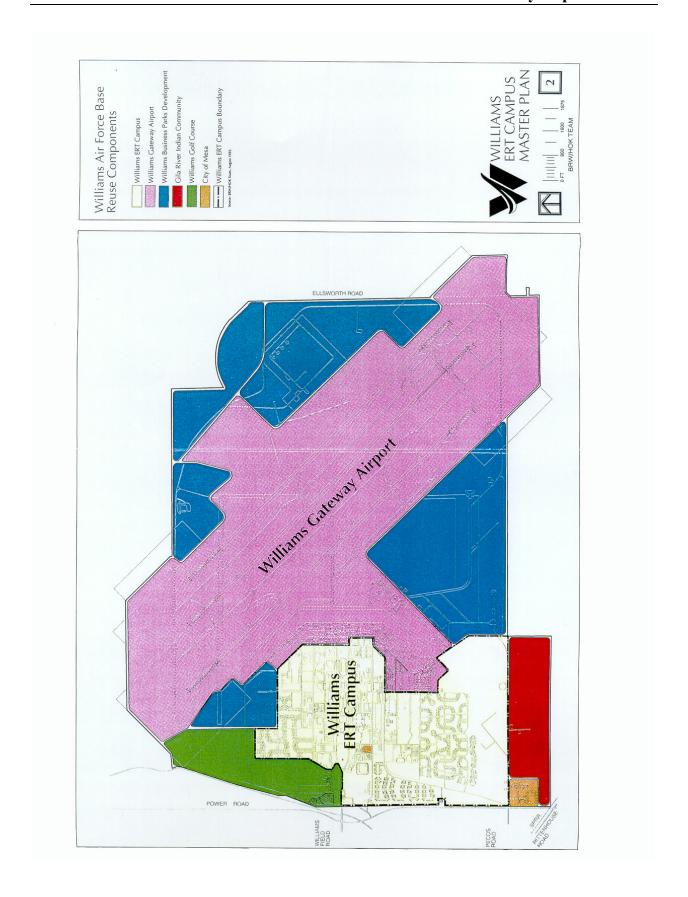
The Airport is situated approximately five miles south of the Superstition Freeway (U.S. 60), which connects to Interstate 10. The planned Santan Freeway will be just north of the airport, providing easy access to both the Airport and the campus. Planned exits at Power Road and Hawes Road will provide freeway access to the airport. A majority of the existing arterial streets around the airport are two lane roadways. The site is bordered by the Ray Road alignment on the north, the Pecos Road alignment on the south, Power Road on the west, and Ellsworth Road on the east. Ten surface parking lots are planned to provide a total of 15,100 parking spaces.

While the area surrounding the Airport was historically agricultural land and undeveloped desert (along with some industrial property), regional development is now moving in the direction of the airport and campus. The Williams Area Transportation Plan states:

"The rapid economic/employment growth around WGA will be further accelerated by the development at WGA. The educational vision for the existing facilities, the intent for airside cargo and passenger aviation uses, and the recommended future employment development of adjacent lands within the boundaries of the Airport are significant. The resulting development will produce regional impacts (i.e. enrollment, overflight, jobs) on the adjoining municipal and unincorporated county jurisdictions."

Airport Development Plans

A reliever airport for Phoenix Sky Harbor International Airport, WGA consists of a general aviation/air cargo/passenger service airfield supporting both commercial and industrial uses. WGA has a mix of facilities, including aviation, shop, warehouse, office, research, and development. In total, the airport contains approximately 50 structures with a total of approximately 535,000 square feet of floor space. WGA is developing as an international aerospace center with aircraft manufacturing, maintenance, modification, testing, and pilot training.



Conversion of an existing building into the initial/interim terminal that will service commercial flights is already underway. The 24,000 square foot terminal will have 4 gates and 4 ticket counters and is expected to be completed in March 2001. Talks are already underway with airlines to begin commercial flights out of WGA and the airport authority expects to begin operations by fall 2001. With the passenger load anticipated to outgrow the interim terminal within the next five to eight years, plans are already underway to develop the permanent terminal on the east end of the property.

WGA is governed by an airport authority consisting of members from Mesa, Gilbert, Queen Creek and the Gila River Indian Community. WGA has been designated as Foreign-Trade Zone #221, allowing companies in the zone to reduce, defer or eliminate custom duties. It is also a Military Reuse Zone, offering aviation companies a significant financial edge in the global marketplace. The WGA website states:

"WGA now has more than 2,400 jobs, and is on its way to becoming a major employment hub for high paying jobs in the East Valley. In addition, the Airport's current annual economic impact on the community is more than \$115 million and continues to grow exponentially as development progresses. Total tax revenue generated is more than \$10 million."

Following is a summary of the economic benefits resulting from the future development of WGA:

Summary of Economic Benefits - 1998					
Benefit Gross Revenues Earnings Employment					
Direct	\$55,363,000	\$19,992,000	617		
Indirect	\$2,758,000	\$674,000	41		
Induced	\$56,675,000	\$14,406,000	562		
Total Benefits	\$114,796,000	\$35,072,000	1,220		

Summary of Economic Benefits - 2020					
Benefit Gross Revenues Earnings Employment					
Direct	\$	76,765,464	\$ 27,205,697	828	
Indirect	\$	411,600,000	\$ 100,574,983	6,163	
Induced	\$	476,213,109	\$ 89,073,342	5,973	
Total Benefits	\$	964,578,573	\$ 216,854,022	12,964	

Source: WGA Master Plan, 1999.

Williams ERT Campus

Williams Educational Research and Training (ERT) Campus exists as a cooperative effort of Arizona State University East (ASU), the Maricopa Community College District (MCCD), University of North Dakota Aerospace Flight Training Center, Embry-Riddle Aeronautical University, the USAF research Laboratory, and Project Challenge. While the primary educational focus remains on aviation and related technological programs as well as fire science and agribusiness, the multi-institutional approach providing a wide array of educational, research, and training facilities helps minimize duplication of efforts. The campus is expected to grow rapidly with an anticipated student population of 20,000 by 2015. The development framework represents the potential build-out of more than 5 million square feet of academic space.

Industrial/Commercial Development at Williams

With the closing of the Base, private entities began to utilize the existing facilities at WGA. Various studies examined how industrial land may be developed adjacent to WGA and recommended strategies for marketing facilities in the aviation-related portion of the Williams Airport Business Parks. The proposed business parks will help establish the airport's long-term economic viability. The business parks are located in three different areas adjacent to the airport runways. These parcels account for 1,000 acres. As of December 2000 there were over twenty tenants, primarily in the aviation industry, there is recent and current construction currently and development plans underway for adding new buildings.

Other Amenities

In addition to the primary development components, the WGA area offers many other attractive amenities:

- Toka Sticks Golf Course, operated by the Gila River Maricopa Indian Community, located on the northwest edge of WGA is an amenity not commonly found adjacent to an airport/industrial park.
- As the largest airport in the East Valley, WGA is host to two popular aviation-related events –
 Copper State Fly-In and the Phoenix 500 Air Show, which draw several thousand people and help increase public awareness of the development potential in and around the Airport.
- As a relatively clean former military base with an active remediation program underway, WGA
 is poised for a fast track development path.
- WGA has an established qualified labor pool within the increasing student population on the Williams ERT Campus.

Conclusion

The cooperative combination of the Airport, ERT Campus, and the industrial areas enhanced by the available amenities helps create a vital and energetic atmosphere conducive to development. With increasing employment and population levels in the East Valley, the growing WGA facility (with additional expansion potential) can act as a stimulus to attract additional local and regional economic growth. According to the Williams Area Transportation Plan, "it seems very likely that development once anticipated for other areas of Greater Phoenix may instead occur at WGA and the surrounding area".

Santan Freeway

The Santan Freeway is a proposed corridor that will extend from Interstate 10 to U.S. 60. The Santan Corridor will cross portions of Chandler, Mesa, and Gilbert. Construction will occur in segments with the first segment between I-10 and the Loop 101 Price Freeway scheduled to open in 2004. The construction schedule will complete more than 10 miles through south Chandler by the end of 2005, more than five miles through southeast Mesa by the end of 2006 and the final eight miles through Gilbert by the end of 2007.

The freeway will be a four-lane divided highway, below grade through most residential areas. It will be above ground through industrial and commercial areas, and at railroad tracks and canal crossings.

In southeast Mesa, the interchanges will be at Power Road, Hawes Road (to be constructed), Elliot Road, and Guadalupe Road. There will be a limited interchange at Baseline Road. At the U.S. 60 interchange, there will be free-flow, freeway-to-freeway ramps. Additional interchanges that will service the Williams Gateway Airport area include Higley Road, Williams Field Road, and Val Vista Drive. The Hawes Road interchange is the closest to the airport. These interchanges are currently funded by ADOT.

The freeway will follow a path along Knox Road to the east then turn northward after the Hawes Road interchange and situated between Hawes Road and Ellsworth Road.

Projected traffic counts for 2019 around the Hawes Road interchange are 51,000 to 55,000 cars per day. From Hawes Road north to U.S. 60, a count of 77,000 cars per day is projected.

Red Mountain Freeway

The portion of Loop 202 that extends north from U.S. 60 to Loop 101 is called the Red Mountain Freeway. Construction begins this year and will continue in segments through 2007 beginning at Country Club Road and continuing eastward until reaching U.S. 60.

Beginning at the U.S. 60 interchange, projected traffic counts for Red Mountain are 60,000 cars per day increasing to 119,000 cars per day near the Loop 101 interchange.

Superstition Freeway

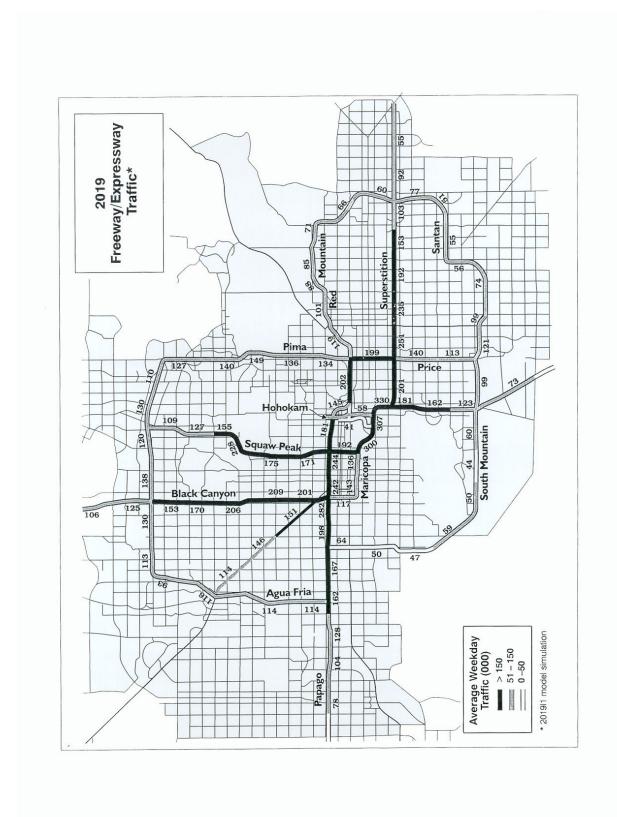
Also known as U.S. 60, the Superstition Freeway extends from Interstate 10 through the East Valley. Although plans for expanding the Freeway from six to ten lanes through Val Vista Road are underway, there are no current plans for the Freeway from Val Vista Road through East Mesa. Current traffic counts at certain intervals are as follows:

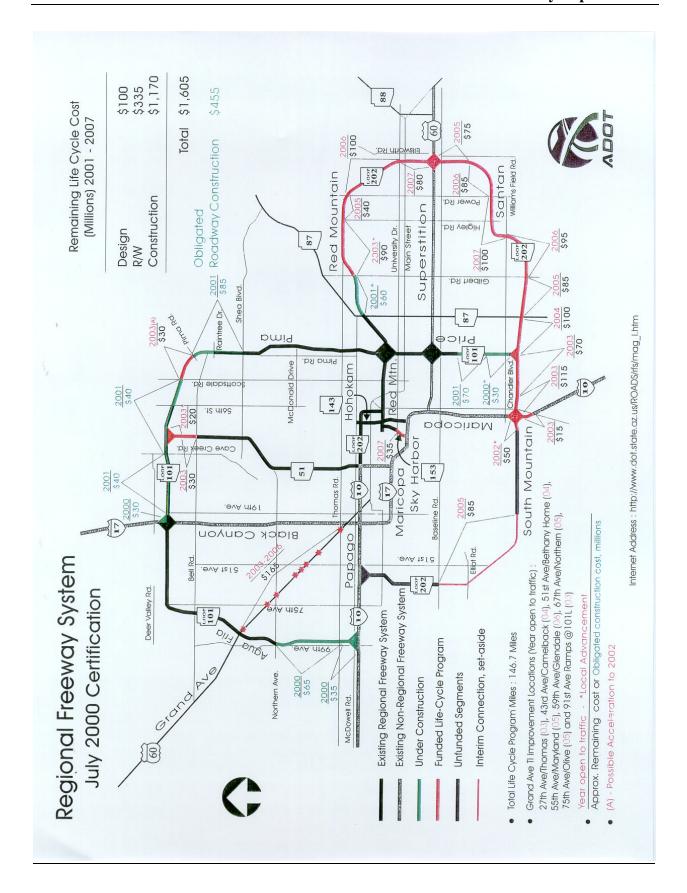
	Cars per Day
Loop 101 to Dobson Road	178,800
Dobson Road to Alma School Road	172,400
Alma School Road to Country Club Drive	166,700
Country Club Drive to Mesa Drive	182,000
Mesa Drive to Stapley Road	183,000
Stapley Road to Gilbert Road	152,000
Gilbert Road to Val Vista Road	125,000
Val Vista Road to Greenfield Road	105,000
Greenfield Road to Higley Road	94,400
Higley Road to Superstition Springs Blvd	47,000
Superstition Springs Blvd to Power Rd	54,000
Power Road to Sossaman Road	63,000
Sossaman Road to Ellsworth Road	61,000
Ellsworth Road to Crismon Road	56,000

The map on the following page contains a detailed layout of the Santan, Red Mountain, and Superstition Freeways.

Freeway Conclusion

The construction of the Santan and Red Mountain Freeways, coupled with widening of the Superstition Freeway will create new development and economic opportunities for areas of Mesa previously with poor access. The freeway construction will not only allow East Valley residents better access in and around Mesa, it will put Mesa on the metropolitan freeway network, providing direct access to all areas of the valley.





Arterial Roadways

According to the Maricopa Association of Governments Transportation Improvement Plan for 2001-2005, several roads in the WGA area are projected to be constructed or improved. In addition, Hunt Highway in Pinal County is expected to be improved to four lanes from the Maricopa County line to Arizona Farms Road and south to S.R. 287. The following new road sections are to be constructed in Mesa according to the Plan:

Queen Creek Road – Power Road to Hawes Road; Meridian Road – Baseline Road to Guadalupe Road; Pecos Road – Ellsworth Road to Power Road; and Ray Road – Sossaman Road to Ellsworth Road.

There are other possible new roads not included in the MAG plan such as:

Guadalupe Road – Signal Butte Road to Meridian Road;

Warner Road – Power Road to Sossaman Road and Ellsworth Road to Meridian Road;

Ray Road – Power Road to Meridian Road;

Williams Field Road – Power Road to Meridian Road;

Pecos Road – Power Road to Ellsworth Road;

Sossaman Road – Warner Road to Germann Road;

Hawes Road – Elliott Road to Rittenhouse Road;

Crismon Road – Baseline Road to Queen Creek Road and Ocotillo Road to Empire

Boulevard: and

Signal Butte Road – Baseline Road to Queen Creek Road.

The roads planned for construction and already funded are included in the chart on the following page. The chart specifically covers roads south of Baseline Road, east of Power Road, north of Hunt Highway, and west of Meridian Road.

Proposed East Mesa Roadway Improvements through 2005									
Roadway	Location	Agency	Timeframe	Project	Length (Miles)				
Santan Freeway	Elliot Rd. to Baseline Rd.	ADOT	2002 - 2005	Design and Construct roadway	1.9				
İ	Power Rd. to Elliot Rd.	ADOT	2002 - 2006	Design and Construct roadway	3.9				
İ	U. S. 60 to Baseline Rd.	ADOT		Design and Construct roadway	0.5				
Hawes Rd.	Queen Creek Rd. to Rittenhouse Rd.	MCDOT	2001	Widen Roadway and realign intersection	0.3				
Power Rd.	Queen Creek Wash	Mesa	2001	Construct Bridge	0.0				
İ	Baseline Rd. to Guadalupe Rd.	Mesa	2002	Widen from 4 to 6 lanes	1.0				
Queen Creek Rd.	Power Rd. to Hawes Rd.	MCDOT	2001	Grade, drain, penetrate & chip	2.0				
Ellsworth Rd.	Germann Rd. to Baseline Rd.	MCDOT	2002	Widen from 2 to 4 lanes	4.0				
	Elliot Rd. to Pecos Rd.	Mesa	2002	Widen up to 6 lanes	4.0				
İ	Germann Rd. to Guadalupe Rd.	Mesa	2002	Widen from 2 to 4 lanes	6.0				
	US 60 to Baseline Rd.	Mesa	2002	Widen from 4 to 6 lanes	0.5				
Crismon Rd.	US 60 to Baseline Rd.	Mesa	2001	Widen from 2 to 4 lanes	0.5				
Elliot Rd.	Meridian Rd. to Mountain Rd.	Mesa	2001	Widen from 2 to 4 lanes	1.0				
Germann Rd.	Ellsworth Rd. to 1/2 Mile East	Mesa	2001	Widen from 2 to 4 lanes	0.5				
Meridian Rd.	Baseline Rd. to Guadalupe Rd.	Mesa	2001	Construct new 2 lanes Roadway	1.0				
İ	Elliot Rd. to 1/2 Mile North	Mesa	2001	Widen from 2 to 4 lanes	1.0				
Pecos Rd.	Hawes Rd. to Ellsworth Rd.	Mesa	2002	Construct new 4 lane Roadway	1.0				
	Power Rd. to Sossaman Rd.	Mesa	2002	Construct new 4 lane Roadway	1.0				
	Sossaman Rd. to Hawes Rd.	Mesa	2002	Construct new 4 lane Roadway	1.0				
Ray Rd.	Hawes Rd. to Ellsworth Rd.	Mesa	2002	Construct new 4 lane Roadway	1.0				
	Sossaman Rd. to Hawes Rd.	Mesa	2002	Construct new 4 lane Roadway	1.0				
Sossaman Rd.	Guadalupe Rd. to Baseline Rd.	Mesa	2003	Widen from 2 to 4 lanes	N/A				
Signal Butte Rd.	Medina Ave. to Guadalupe Rd.	Mesa	2001	Construct new 2 lane Roadway	0.5				
Guadalupe Rd.	Hawes Rd. to Meridian Rd.	MCDOT	2001	Widen to 4 lanes	1.0				

Source: Maricopa Association of Governments, Transportation Improvement Plan (2001-2005)

Williams Gateway Airport

There are many reasons for WGA to become a successful satellite commercial service facility. Initial forecasts predicted air cargo operations at WGA to begin in 2000; however, over 200 tons of cargo have been shipped from WGA to date. Aerospace companies including Boeing, BF Goodrich and deHavilland have already utilized the Airport for testing of aircraft and components, including the new Boeing 777. In 1997, flight operations reached 157,000 take-offs and landings. Commercial flight operations are expected to commence in the near future. Growth tends to feed off itself, thus not only will the Airport, the Williams Campus, and the accompanying industrial uses support and complement growth in other sectors, but will also have an impact on regional growth.

WGA Forecast Summary							
	Short Term	Intermediate Term	Long Term				
Annual Enplanements	250,000	650,000	2,000,000				
Enplaned Cargo (lbs.)	12,340,000	16,450,000	24,670,000				
Based Aircraft	100	135	210				
Annual Operations							
Commercial Service/Air Taxi	9,100	18,100	50,700				
Air Cargo	800	1,100	1,600				
General Aviation	189,300	209,300	252,900				
Military	33,000	33,000	33,000				
Total Annual Operations	232,200	261,500	338,200				

Source: Williams Gateway Airport Masterplan, 1999

Note: Short term begins from the adoption of the masterplan. Each term is defined by a 5-7 years range.

Employment is expected to increase rapidly with use of the airport for air cargo service. Student population and Campus staff employment is expected to rise quickly, as several public and private institutions continue to move operations to Williams. Former Base housing is expected to be filled to capacity with college students. These direct impacts will be followed by indirect impacts. Increases in industrial employment will encourage growth of supplier operation and other business services. As this reaches a higher level of economic maturity, it will become more attractive to other large-scale users, thereby helping repeat the cycle of local economic expansion.

The following table summarizes WGA and ERT growth estimates.

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Williams Gateway Airport and Williams ERT Campus Growth Projections 1995-2015									
	1995	2000	2005	2010	2015				
EMPLOYMENT									
Williams Gateway Airport	1,000	4,000	8,000	12,000	16,000				
Office	100	250	500	750	1,000				
Industrial	800	2,500	5,000	7,500	10,000				
Williams ERT Campus									
Staff	100	1,250	2,500	3,750	5,000				
POPULATION									
Resident Units									
Dormitory	312	600	600	600	600				
Other	714	714	714	714	714				
Occupied Units									
Dormitory	312	600	600	600	600				
Other	350	714	714	714	714				
Population per Unit									
Dormitory	1.33	1.33	1.33	1.33	1.33				
Other	2.75	2.75	2.75	2.75	2.75				
Total Population	1,440	2,720	2,720	2,720	2,720				
STUDENTS (FTE)	1,407	5,000	10,000	15,000	20,000				

Source: Williams Gateway Airport Authority, ASU East, and Applied Economics, 1996.

WGA offers the potential for surrounding jurisdictions to plan for their collective future well into the 21st Century. WGA is having a significant impact on the image, identity, and economic potential of the surrounding communities, and the future of the Southeast Valley as the largest Airport in the East Valley. WGA has a fully constructed airport with three of the longest runways in the Phoenix regional aviation system, measuring from 9,400 feet to 10,400 feet. Also, WGA has the ability to provide service to virtually any aircraft. At the same time with WGA's concentration on industrial and public (educational) uses along with its position as the core area for economic development, the airport area is expected to attract the majority of office and industrial users to the area, while most of the indirect impacts would be spread out beyond the airport.

Future Industrial Areas

There are three primary areas in Mesa to develop major future office/industrial projects. The first is the Superstition Freeway corridor. This will remain a key commercial spine for Mesa, but the industrial parks are smaller in size and constantly under attack from retail, car dealers, hotels and church uses. This area will continue to be a popular commercial corridor, but cannot accommodate large corporate users or corporate campuses.

The second vacant office/industrial area surrounds Falcon Field and the Boeing operations. This area contains 1,565 vacant commercial acres, and should see significant development activity in the near term with extension of the Red Mountain Freeway in 2003 to Higley Road. This area is already well established and existing improvements may impact the long-term reputation and desire for land in this area.

The final major office/industrial area in Mesa is the WGA area. This area contains about 9,500 vacant acres (including land in Gilbert and Queen Creek), and is just beginning to see development activities. Long term, this area has the potential to be the major employment center in the southeast Valley.

Freeway/Roads

The majority of vacant industrial parcels in Mesa are adjacent to the planned regional freeway system. The system will be completed in 2007 allowing potential employers access to the existing labor force. Access to Freeway systems is a key element when relocating large industrial and office users.

Existing Industrial Users

The East Valley has an existing industrial base, which positively impacts growth. Competition positively affects growth, because existing companies are seen as a source of potential employees.

Large Parcels

Large parcel sizes are seen as a rare commodity for corporate and industrial users. There are several large vacant industrial parcels in the Williams Gateway area with a few parcels over 600 acres available for industrial development. Historically, companies such as Intel, Motorola, Boeing and USAA have acquired large parcels of land of 100 acres or more for their expansion or relocations to the Valley. Few competing areas put together comparable large parcels with adequate access in the East Valley.

Rail

Light rail is viewed as an additional asset in attracting employers. The Phoenix-Mesa MSA area is beginning construction of a regional light rail system. The current proposed alignment for the light rail in Mesa is along Main Street to a terminus at either downtown Mesa or the East Valley Institute of Technology on Main and Longmore. This alignment runs just north of the city's western industrial core.

In addition to the approved light rail system, a commuter rail system has been speculated as a possibility in the metropolitan area. This system could run along the existing Union Pacific Railroad track and right-of-way. This system would be similar to Los Angeles' Metrolink service. This line could run between Downtown Phoenix to Williams Gateway Airport, while stopping in Downtown Tempe, Mesa, and Gilbert. This would be viewed as a long-term asset to potential employers.

Housing Mix/Affordability

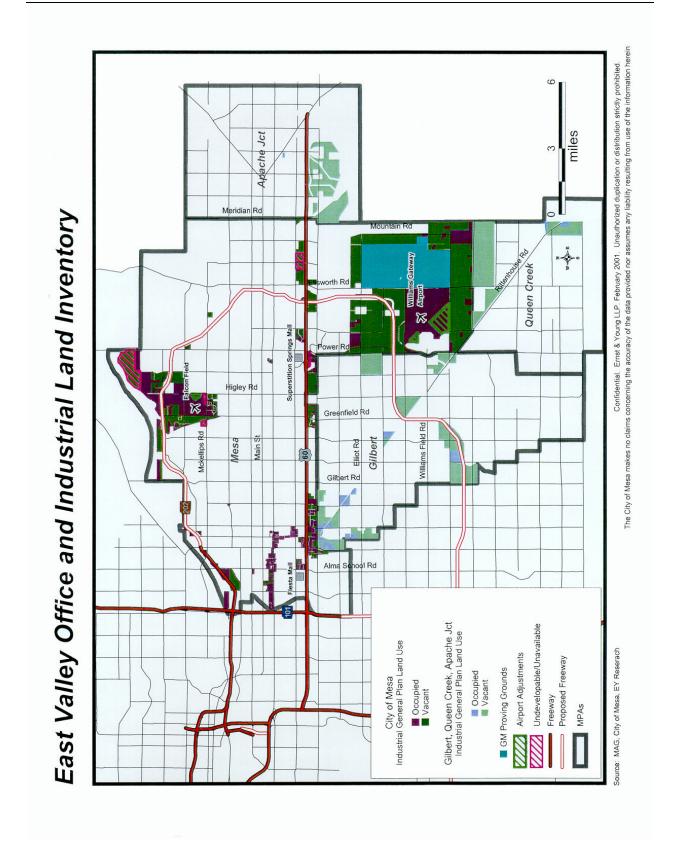
Area housing is comprised of a mix of luxury and affordable residential housing disseminated throughout Mesa, Gilbert, Queen Creek, Apache Junction and Western Pinal County. A mixture of established and new communities creates a perceived high quality of life. Developments such as Las Sendas and Val Vista Lakes offer residents executive housing in a resort lifestyle featuring lakes, golf courses, and scenic views. Homes in both communities sell for \$150,000 to \$400,000. Many developments in the area offer custom lots for luxury housing exceeding \$400,000 and some existing custom developments have properties which retail far in excess of that figure. Finally, affordable housing is also available, with developments in the Johnson Ranch master planned community offering new homes from the high-\$70,000s. Other subdivisions in Apache Junction, and Queen Creek are able to sell new homes under \$100,000. The majority of new homes in new master planned communities such as Power Ranch, Parkwood Ranch, Augusta Ranch and Santa Rita Ranch being built in Mesa and Gilbert have prices starting in the \$110,000 to \$130,000 range.

School Quality

Schools in the East Valley rank among the best in Arizona. Both the Mesa Public School District and Gilbert Public School District have distinguished themselves among Arizona schools by consistently exceeding SAT and ACT national averages. The Mesa and Gilbert have received "Gold Medal" designations by Expansion Management magazine. This is the highest award given an honor that only the top 18 percent of the 2,234 evaluated districts receive.

Summary

Overall, all of the factors seem to be in place for rapid office and industrial growth in Mesa. The area is served by a major reliever airport, new freeways are opening, and migration continues at strong levels and community amenities provide a high quality of life. We believe Mesa, and the WGA area in general, are poised for significant growth in the coming decades.



As part of its General Plan, the City of Mesa has set aside a portion of its land for business and industry to use for providing employment for its citizens. The supply model quantifies the amount of vacant land set aside for industrial uses. The general land use designations, General Industrial, Commerce Park, and Office, are defined as:

- Office denotes areas for professional office, tourism, and service uses with good arterial access.
- General Industrial denotes major employment areas, including wholesaling, manufacturing, distribution, and warehousing uses within the community. These uses may require rail access or airport accessibility and are generally intensive in nature. The development of industrial areas shall be such that the least intense users should be located along arterial streets, where visibility to the public is likely. More intense uses should be located away from the arterial streets, buffered by other areas.
- Commerce Park denotes major potential employment centers within a business park environment. Commerce parks may include a mix of light, industrial, research and development, professional office, office showroom, office/warehouse, retail, service, and related uses. Design standards should be applied to assure a consistent and high quality physical product. Typical techniques such as screening, landscaping, buffers, separation of incompatible uses, lighting, design, and architectural standards may be used.

Mesa's 1996 General Plan lists various community goals, including:

 To develop Williams Gateway Airport, Falcon Field, and surrounding areas in cooperation with other entities to provide maximum economic benefit for the community.

Mesa's 1996 General Plan – Land Use Element offers statements, such as the following:

Williams Gateway/General Motors (GM)

The issues surrounding these land uses are complex and involve a balance between current land use demands for housing and the provision of sites adequate for future marketing and development of the area. The opportunity for developing a world renowned transportation and employment center in the Southeast Valley should not be forfeited for short-term goals.

Economic Benefits

- Concurrent with development of this Mesa General Plan was development of the Williams Regional Planning Study (WRPS). One of the major goals of the WRPS and Mesa General Plan was to maximize the regional economic benefits of Williams Gateway Airport, the Williams ERT Campus and surrounding area.
 - To maximize the regional economic benefits of Williams Gateway Airport.
 - The City shall protect the long-term employment potential for lands surrounding Williams Gateway Airport by designating appropriate areas for residential, commercial, and office use.
 - The City shall not allow the encroachment of residential uses in the area surrounding Williams Gateway Airport that could create unsafe living conditions and impact the long-term viability of the airport.
 - The City shall adopt and implement those noise attenuation standards as recommended by the Williams Regional Planning Study.
- To increase Mesa's employment to population ratio to at least the County average.
- To maintain a reasonable supply of available commercial and industrial land to support Mesa's population growth.
- Monitor the availability of industrial land for immediate use by developing a database which relates zoning to utility and infrastructure improvements.
- Provide a wide range of industrial land types to support a variety of industrial uses. In particular, maintain an adequate supply of freeway-oriented, as well as aviation-related industrial property.
- Develop programs and budgets to extend utilities to underserved industrial areas through the use of public and private financing mechanisms such as, but not limited to, improvement districts, community facilities districts, municipal bonds, general municipal revenues, and other financing alternatives.

Methodology

Two spatial databases were acquired from the City for use in the study. They are the city's General Land Use Plan and the planning department's existing Land Use Plan. The planning staff created the existing Land Use Plan in 2000. The data has the following disclaimer:

The City of Mesa makes no claims concerning the accuracy of the data provided nor assumes any

Mesa General Plan Land Use 2000					
Туре	Acres	Type <u>Acres</u>			
CC - Community Commerical	1,710	CP - Commerce Park 6,946			
NC - Neighborhood Commercial	4,701	GI - General Industrial 13,447			
RC - Regional Commercial	538	O - Office 99			
Commerical Total	6,949	Office/Industrial Total 20,493			
HDR - High Density Residential	3,309	MU - Mixed Use 2,269			
LDR - Low Density Residential	7,205	GM PROVING GROUNDS 5,052			
MDR - Medium Density Residential	34,607	P/OS - Park/Open Space 7,561			
MHDR - Medium to High Density Residential	7,611	P/SP - Public/Semi Private 2,765			
MLDR - Medium to Low Density Residential	6,877	S - Schools 1,611			
Residential Total	59,609	Other Total 19,258			

Total for Mesa Planning Area	106,309
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 $liability\ resulting\ from\ use\ of\ the\ information\ herein.$

Source: City of Mesa, EY Research

The total acreage available for office and industrial land uses was calculated from the General Plan database. The following methodology was employed. The 1996 Mesa General Plan was utilized as a starting point. All parcels identified as CP, GI, and O land uses (descriptions are included in the addendum) were identified. From this 1996 base, we deducted:

- Parcels developed since database creation;
- Parcels rezoned since database creation to uses other than CP, GI, and O;
- Undevelopable and unavailable parcels;
- Infrastructure requirements;
- Open Storage lots that will not contain permanent building improvements;
- Service retail uses.

We also added the following parcels:

- Parcels around the Airport that contain developable acreage;
- GM Desert Proving Grounds.

The three office and industrial land uses were then identified and overlaid with the current land use database (CP, GI, and O). The existing land database is based on current parcels; therefore no adjustment was necessary to account for existing roads.

City of Mesa MPA Vacant Office/Industrial Land		
General Plan Land Use	Acres	
СР	5,662	
GI	6,269	
О	56	
Total Vacant Office/Industrial Land	11,987	

Source: City of Mesa, EY Research

Adjustments

Undevelopable/Unavailable

Further adjustments to the total available acreage were made in order to estimate the total developable industrial land in the City of Mesa. The first set of adjustments was based on portions of land that were not quantified by the databases. The following parcels were defined as undevelopable or unavailable (943 acres) and removed from the vacant industrial land model:

- 660 Acres State land North of Indian School Alignment, West of Power Road This land is currently on a long-term land lease to Talley Industries from the State Land Department.
- 113 Acres Various zoning conflicts Near Falcon Field and Superstition Springs Center Four separate parcels identified on the Industrial Land Inventory map have existing zoning inconsistent with the General Plan.
- 170 Acres New development SWC and SEC Crismon and Southern Home Depot is developing the southeast corner and a new church property is developing the southwest corner along with additional retail.

Airport (Developable)

Adjustments were also made for land not classified as vacant, but qualifies as available inventory. These parcels (522 acres) are near Mesa's two airports and were added back to the base:

- 477 Acres Williams Gateway Airport A 421-acre parcel southwest of the runways and a 56-acre parcel northwest of the runways are added to the inventory.
- 45 Acres Falcon Field A 45-acre parcel east of the runways is added to the inventory.

Future Storage/Open Yards

We deducted 5% of the available inventory to account for open storage yards for construction companies, nurseries, salvage operations, rock companies (retail) and other industries occupying large parcels of land with little or no building improvements. This figure was based on estimates from the Mesa planning department. As our employment figures are converted to building square footage and open storage yards do not include buildings, we deducted a small percentage from the land supply base to accommodate these uses.

GM Desert Proving Grounds

The GM Desert Proving Grounds is also added to the inventory. It has been publicized that GM has plans to abandon this facility and move to Mexico. It is assumed that the highest and best use for a facility of this size will not be automotive proving grounds and the site will be vacated and available for other uses. Therefore the 5,022-acre parcel was included in the vacant land inventory even though GM continues to occupy the property.

Other Deductions

From this subtotal of 16,019 acres, two additional deductions were applied.

Public ROW

Based on discussions with Mesa representatives and business park developers, 15% of the total acreage was deducted from the inventory to account for necessary infrastructure and public improvements (roads, sidewalks, utilities, open space, parks, etc.). A majority of this land will be dedicated to roadway infrastructure. Although existing roads are not included in the database, future improvements are not accounted for in the land use figures.

Support Retail

Another 10% of the acreage was removed from the subtotal to account for future support retail on office/industrial designated land. This was estimated as a minimum amount by Mesa planning officials based on past observations. Historically a percentage of industrial land has been developed with retail uses for services, gas stations, restaurants, etc. New employment opportunities create and require adjacent commercial activity.

Results

The following table illustrates how the 11,632 available vacant developable office and industrial acreage in the City of Mesa planning area was calculated:

City of Mesa - Vacant Office/Industrial Land Based on the General Plan			
Vacant Office and Industrial Land		Acres	
СР		5,662	
GI		6,269	
0		56	
Total Vacant Land		11,987	
Adjustments			
Undevelopable/Unavailable		(943)	
Airport (Developable)		522	
GM Proving Grounds		5,052	
Total Adjustments		4,631	
Total Devlopable Acreage		16,618	
Less			
Support Retail Uses	10%	(1,662)	
Open Storage Lots	5%	(831)	
Infrastructure/Public ROW/Open Space	15%	(2,493)	
Deductions		(4,986)	
Total Devlopable Acreage		11,632	

Source: City of Mesa, EY Research

It should be noted, we did not deduct any acreage currently planned for CP, GI or O land uses that could be developed for other uses (we did deduct support retail uses on the acreage). The land use map is based on anticipated future events, but as has historically been the case, some of the CP, GI and O designated land will be developed with neighborhood retail, hotels, churches, parks, schools, etc. These reclassification deductions were not applied, we assumed every acre of CP, GI and O designated would be developed with those uses in quantification of Mesa's available supply. This conservatively over estimates by some percentage, the supply of vacant and available future office and industrial land.

Regional Model

The existing vacant office and industrial land supply was also estimated for the other cities in the region. Two spatial databases were acquired from the Maricopa Association of Governments (MAG). They were created in 1996, and contain the General Plan Land Uses and Existing Land Uses for all of Maricopa County and Apache Junction. The planning areas for the cities of Gilbert, Queen Creek and Apache Junction were analyzed in this analysis. Parcels that were recorded as Business Park, Industrial, and Warehouse/Distribution were classified as office and industrial. These parcels were overlaid with the Existing Land Use model. Parcels with existing land uses classified as vacant or agricultural were included in the totals.

Assumptions

The following parcels were removed from the regional vacant industrial land model:

■ SEC Country Club and Baseline – 50% of this land was removed from the model. A majority of these parcels have been developed since the data was created in 1996.

•

- Apache Junction- All industrial land in Apache Junction was removed from the model. The majority of these parcels are currently part of a large tract of state trust land (over 250 square miles) and not currently available for development. This state land could be a possible candidate for open space preservation. While we have not included any office and industrial land in our supply calculations, we also did not assume any residential units would be constructed in this area on state land which would increase demand if it were included.
- Gilbert Gateway Plan The newly adopted Gilbert Gateway Plan deleted 270 acres of office and industrial land from Gilbert's general plan.

State trust land in the Mesa planning area is assumed available for development. These tracts are smaller in size and more likely to be sold by the state.

The subtotal of 6,361 acres is subjected to the same coverage ratios as the City of Mesa model with the following exception: 20% was deducted for future roads and other infrastructure. This number is higher than the 15% used for Mesa because MAG does not remove existing roadways from the database.

Regional Results

The following table illustrates how the 4,135 vacant developable office and industrial acres in the Gilbert, Queen Creek, and Apache Junction planning areas were calculated. There is no industrial land planned for unincorporated Pinal county and therefore not included in this model.

Other Vacant Office/Industrial Land Located in Gilbert, Queen Creek, Apache Jct.			
Total Available		9,519	
Adjustments			
50% of SEC CC/Baseline			
(Build out since 96)		(423)	
Gilbert Gateway Plan Changes		(270)	
Apache Jct			
(Uncommitted State Land)		(2,465)	
Gross Office/Industrial Acreage		6,361	
Less:			
Support Retail Uses	10%	(636)	
Open Stroage Lots	5%	(318)	
Infrastructure/ROW/Open Space	20%	(1,272)	
Deductions		(2,226)	
Total Devlopable Office/Industrial Land		4,135	

Source: MAG, EY

The amount of demand for new office and industrial space is dependent on the number of new residents seeking employment in the region. Demand is calculated based on the residential build-out of the East Valley. The Far East Valley is defined in this report as the planning areas of Mesa, Gilbert, Queen Creek and Apache Junction It also includes the unincorporated areas of Gold Canyon, which is located east of Apache Junction, and the newly developing area along the Hunt Highway Corridor between Queen Creek and Florence. New office and industrial demand is a function of the additional employment required to sustain the residential build-out of the East Valley.

Population Assumptions

Existing population estimates and build-out population figures were compared. Based upon the number of new residents anticipated and the number of employees, the acreage required to house these new employees was calculated.

Existing Population

Current populations of the cities of Mesa, Gilbert, Queen Creek, and Apache Junction are based on the Arizona Department of Economic Security's July 1, 2000 estimate. The population was estimated for the unincorporated portion of Maricopa County inside the Mesa planning area from the 1995 Maricopa County Special Census. This is done because this population is not included in the Mesa population estimate, but is included in Mesa's planning area and, therefore, the regional build-out model. (The population of Gold Canyon and the Hunt Highway Corridor County is based upon research using Landiscor Aerial Photography and The Meyers Group new housing data).

Existing East Valley Population			
Mesa ¹	388,185		
Gilbert ¹	108,745		
Apache Jct ¹	25,880		
Queen Creek ¹	3,955		
Unic Maricopa County in Mesa MPA ²	36,387		
Hunt Hwy Corridor ³	500		
Gold Canyon ³	6,300		

¹ Arizona DES July 2000

Source: MAG, US Census Bureau, EY Research

² Maricopa County Special Census 1995

³ EY Research 2001

Build-Out Population

The estimated study area population at complete build-out was calculated by analyzing the General Land Use Plans for the cities in the study area region. The acreages for different types of residential land use categorizations was calculated using Maricopa Association of Government's General Land Use Plan spatial database created July 1, 1995. It is assumed that no major changes to the land use plans have been made since the data was created. We deducted 18% for infrastructure, open space, parks, etc.

A multiplier was applied to each residential land use category to calculate the number of future potential dwelling units. Then an average household size of 2.6 persons per household was applied to all categories to estimate the new population. This average household size of 2.6 was based upon the 1990 figure for Maricopa County developed for the US Census Bureau. It was assumed a 100% occupancy of all new units.

Our estimates indicate 1,107,653 residents at build out in the Far East Valley communities considered, with 537,701 new residents. The following table summarized our estimated build out population.

	Regional Build Out Model			
	ASSUMPTIONS	du/acre		
	Large Lot Residential	1.5		
	Medium Density Residential	10.0		
	Small Lot Residential	3.5		
	High Density Residential	20.0		
	Rural	0.5		
	Avg HHld Size	2.6		
	Open Space / Other ROW	18%		
		Acres from	Total Estimated	Total Estimated
		1996 General Plan	Du at Build Out	Population at Build Out
Apache Jct	Large Lot Residential	5	8	
	Medium Density Residential	1,202	12,024	
	Small Lot Residential	5,184	18,145	
	Rural	10,057	5,029	
	Total Du		35,206	91,535
	Total Pop			75,059
Gilbert	Large Lot Residential	7,091	10,637	
	Medium Density Residential	2,189	21,894	
	Small Lot Residential	14,846	51,962	
	Rural	9,645	4,823	
	Total Du		89,316	232,221
	Total Pop			190,421
Mesa	High Density Residential	3,058	61,168	
	Large Lot Residential	6,683	10,025	
	Medium Density Residential	7,498	74,984	
	Small Lot Residential	33,776	118,216	
	Rural	7,056	3,528	
	Total Du		267,921	696,593
	Total Pop			571,207
Queen Creek	Large Lot Residential	2,929	4,394	
	Small Lot Residential	6,415	22,453	
	Rural	12,692	6,346	
	Total Du		33,192	86,300
	Total Pop			70,766
Hunt Hwy Corridor			70,000	
,	Total Pop		•	182,000
Gold Canyon	Total Du		7,000	
	Total Pop			18,200
	•			,
	Region Du		502,635	
	Region Pop		,	1,107,653

Employee Assumptions

It was assumed that new residential population in the region will translate to a new employment labor base in the region. Estimates were made to calculate the number of employees, for new industrial and office employees, and industrial and office acreage required to support the residential population at build-out.

Jobs per New Resident

The number of jobs per new resident is calculated based on the current ratio of population and employment in the Phoenix-Mesa MSA overall. The latest population estimate for the U.S. Census Bureau for the Phoenix-Mesa MSA is 3,013,696 on July 1, 1999. The estimate of the Labor Force for the same month from the Bureau of Labor Statistics is 1,585,962. Based on these numbers, the ratio of jobs per capita is 0.53. Based on the demographic trends anticipated for new Far East Valley residents, we believe a ratio of .5 to .6 overall is possible for these East Valley residents and selected a figure of .55. We obtained the following jobs/capita figures from the 1995 special census data.

	1995	1995	Jobs/Resident
	Employment	Population	
Mesa	128,376	372,378	0.34
Tempe	138,857	152,738	0.91
Chandler	47,288	135,382	0.35
Gilbert	16,339	65,460	0.25
Scottsdale	118,609	168,615	0.70
Phoenix	664,280	1,154,139	0.58
Others	151,051	479,988	0.31
Maricopa County	1,264,800	2,528,700	0.50

Source: MAG and US Census Bureau

The jobs per capita figure has been increasing due to a younger migration to the valley in the 1990s, more two income families and longer careers. We believe the 2000 census will indicate a per capita figure above the 1995 figure.

Employment in Office and Industrial Land Uses

The percentage of employees that work in office and industrial land use categories is based on a 1996 MAG study of Maricopa County. The study estimates 25% of the county's jobs are in offices and 23% are in industrial buildings. For Mesa, 26% of jobs are on office land uses and 15% are industrial.

	% Office	% Industrial	Sub-Total
Mesa	26%	15%	41%
Scottsdale	37%	10%	47%
Tempe	22%	35%	57%

The following jobs as a percentage of land uses were indicated by a 1996 MAG study:

As the preceding table indicates, Mesa has the lowest current percentage of office and industrial jobs of the cities studied. We believe there is a strong argument for increasing the ratios for Mesa due to the following:

28%

25%

24%

23%

53%

48%

• The completion of the freeways into Mesa;

Phoenix

Total Maricopa County

- The development of WGA, build out of competing areas; and
- Continued development of residential uses in the Far East Valley.

We believe a future office ratio of 28% and industrial ratio of 20% reflect the demographics of the future East Valley workforce.

Employees per Acre

Once the number of office and industrial employees were determined, the number of acres required to house these employees was estimated by determining the number of employees per acre. The assumptions were extracted from figures taken from the Urban Land Institute's Industrial Development Handbook. The assumption for employees per gross acre was calculated by averaging the number of employees per gross acre for three types of major industrial categories:

- *Intensive 24 employees per gross acre*
- Intermediate Extensive 10 employees per gross acre
- Extensive 8 employees per gross acre Source: ULI Industrial Handbook Table 5-4 Employees per Gross Acre 1980

Based on the average these numbers it is estimated that there will be 14 employees per industrial acre.

The number of office employees per acre was estimated based on Table 4-7 of the ULI Industrial Development Handbook. A figure of 100 employees per acre was adjusted downward by 25% to reflect a lower site coverage ratio, which is likely in Mesa due to a predominance of low-rise and campus-style buildings.

The following table summarizes our estimates of office with industrial land demand based on population and employment figures.

Office/Industrial Acreage Required for Far East Valley Residential Build Out				
ASSUMPTIONS				
Jobs per New Resident ¹	0.55			
	Current Population ³	Build out Population ⁴		
Mesa	388,185	571,207		
Unic Maricopa County in Mesa MPA	36,387			
Gilbert	108,745	190,421		
Apache Jct	25,880	75,059		
Queen Creek	3,955	70,766		
Hunt Hwy Corridor	500	182,000		
Gold Canyon	6,300	18,200		
Total	569,952	1,107,653		
Build out Employment		609,209		
Existing Employees	0.34	193,784		
New Employees		415,425		
			Employees	
	Proposed Land Use	Employees	per Acre ⁵	Acres Required
Office	28%	116,319	75	1,551
Industrial	20%	83,085	14	5,935
	Total Net Acres Required:			7,486
	PLUS:			
	Vacancy Adjustment		5%	374
7	Total Gross Acres Required			7,860

¹From Arizona DES and EY Research (Unic MC, Western Pinal & Gold Canyon)

²Based on EY Build Out Model from Land Use Acreages from MAG General Plan and EY Research (Western Pinal & Gold Canyon)

³ From ULI Industrial Devlopment Hand Book Office coverage ratio adjusted downward 25% (from .5 to .375) resulting in a deduction in the number of employees per acre by 25% (1

Demand Model Evaluation

The model assumptions utilized in this analysis were tested against the current figures for Maricopa County. The predicted office and industrial land base was within 7% of the actual industrial land use figures. The model used MAG's 1995 population figures and tested it against the actual land use of the 1996 MAG database. Employment between office and industrial jobs were divided equally in this model comparable to county-wide figures. Large industrial parcels were not included in the count of current industrial land use. This number was discounted 20% for existing roadway infrastructure. The following calculation illustrates the number of occupied acres in Maricopa County, based on our model

Estimate of Required Office/Industrial Land for Maricopa County 1995				
95 MAG Emp	ployment Estimate	1,264,800		
95 Office and	Industrial Employement	607,104		
	Land Proposed	Employees	Employees per Acre	Acres
Office	50%	303,552	75	4,047
Industrial	50%	303,552	14	21,682
Developed Ac	cres:			25,730

Source: MAG

assumptions.

The next table illustrates actual existing land uses in Maricopa County

Actual 1995 MAG Existing Land Use with Coverage Ratio Assumptions			
A stand 05 MAC Entition I and I lo			
Actual 95 MAG Existing Land Use			
Business Park		14,276	
Industrial		22,408	
Office		3,523	
Warehouse/Dist Center		3,370	
	Total Existing	43,577	
Large Parcel Exceptions GM Other Mesa Exceptions Grand/Birdsong		4,970 610 3,600	
Grand/Patton	Total Exceptions	930 10,110	
	Sub Total	33,467	
Less Existing Street/Infrastructure C	Less Existing Street/Infrastructure Coverage 20%		
Total Actual Maricopa County Office/Industrial Acreage: 26,774			

Source: MAG, EY Research

Our demand model estimates 25,000 office and industrial acres in Maricopa County and MAG's actual land use map identifies 26,774 acres, a variance of 6%.

Results

It order to accommodate new residential growth planned for the Far East Valley and to recapture a portion of existing Mesa residents to jobs in the city, our models show that 7,860 acres of office and industrial acreage accommodates the estimated future employment growth in the East Valley.

Our analysis estimates that 15,767 acres of vacant developable office and industrial acreage are potentially available in the East Valley, with 11,632 acres located in the city of Mesa. Our demand model estimates that 7,860 acres of office and industrial land will be required to sustain residential build out of East Valley cities.

Our analysis indicates that there is more future supply of office and industrial land than demand in the East Valley appears to warrant, based upon estimated population and employment growth. There are, however, several factors that must be considered in evaluating the credibility of the East Valley supply base including:

- Long-term general plans may change in the future based upon changing market demands:
- Parcels that do not have adequate freeway access and limited development potential; and
- Parcels that will be rezoned for other uses (which has been occurring over the past several years in Mesa).

We have not deducted any of the preceding acreages from our supply base. It is possible that additional acreage currently designated for office and industrial development could be developed with other commercial or residential uses.

We also did not address the issue of which acreage would be developed first. We believe the WGA area will become a major employment center, and it should sell out earlier than other planned office and industrial parcels in the Far East Valley due superior access to WGA, roads, utilities, population, and city amenities.

Therefore, while there appears to be an excess of office and industrial land designated in the Far East Valley, we believe the WGA area will develop prior to the development of other secondary office and industrial areas.

The city of Mesa is transitioning from a bedroom community to a stable economic region and source of major employment as illustrated in the following:

- Development and expansion of WGA.
- Mesa has a large current and planned employment base. This will be viewed as a benefit to potential office and industrial users.
- With the completion of the Loop 202 freeway, the major employment areas will have good access to the freeway system and; therefore, access to the employment base and outbound trucking routes.

• The planned expansion of the ERT Campus will provide direct access to employees. As Mesa's residential growth begins to build out, other residential opportunities will continue in the cities of Gilbert, Queen Creek and Apache Junction, and a new residential opportunity arrives in western Pinal County.

These planned developments could allow Williams Gateway Airport to emerge as a regional employment center.

It is important for Mesa to ensure an employment base for its own, and the regions, residents. A strong office and industrial base will allow Mesa's residents to have stable higher paying jobs, closer to home. As residential growth encroaches on industrial areas and the Williams Gateway Airport, these developments could have a negative impact upon the employment growth of the region and the expansion of the airport because of:

- Noise and congestion from area residents;
- Industry/Home owner conflicts; and
- Impacts communities perceived lack of long-term planning.

It is also critical to a city's financial condition to have a strong office industrial base.

Finally, economic development does not stop upon revitalized build out. A community like Mesa with all of the necessary support infrastructure in place and pro-growth business attitude can continue to capture regional demand after its residential base is built out, as Tempe has demonstrated.